Abstract

Method and circuit arrangement for limiting an overvoltage

In order to limit an overvoltage at a parallel circuit of IGBT (3) and freewheeling diode (7), an undesirable current spike is used to switch on the intrinsically turned-off IGBT (3') during the presence of the current spike precisely to an extent such that a current which counteracts the overvoltage arises in the IGBT/freewheeling diode pair. The oppositely acting current reduces the current gradient in leakage inductances (L_σ) and reduces the undesirable induced overvoltages.